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Canada's Unemployment Insurance Program as an Economic Stabiliser

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Purpose

The purpose of this brief is to report on the empirical findings relating to the role of UI as an automatic stabiliser in the Canadian economy and how this role might have changed over time. This evaluation is made with a special reference to the two recent recessions, namely, 1981-82 and 1990-91.

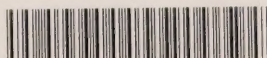
Background

This is one of two macro-economic simulation studies of unemployment insurance conducted as part of the first comprehensive evaluation of the Regular UI program in Canada. This research approach was adopted in part to test the sensitivity of results to the large models employed. Where the main findings of these two independent studies converge, there would be greater confidence in drawing conclusions.

The study reported in this briefing was carried out by the WEFA Canada Group. The other study on a similar subject but with a slightly different focus, was carried out by the Policy and Economic Analysis Program (PEAP) of the University of Toronto, utilising the FOCUS macroeconomic model. The results of the latter study are reported in a separate brief.

Like the progressive income tax system, the UI program acts as a "built-in" or automatic stabiliser in the economy. In times of an economic recession, as unemployment increases, UI benefit payments increase but UI revenues collected from premiums decline, thereby injecting more disposable income into the economy than it takes out. Thus UI expenditure increases more than UI revenue. During an economic expansion, on the other hand, as the employment level increases and unemployment declines, fewer people draw UI benefits while the UI revenue increases. These result in the UI program drawing income out of the economy, thereby reducing the inflationary pressures developing during the recovery/expansion phase of the economic cycle. In both cases, the UI system tends to dampen the amplitude of the cyclical fluctuations.

The extent and specific features of this UI stabilisation impact are largely empirical issues. For an analysis and quantitative evaluation of the stabilisation impact, it is necessary to use a general equilibrium macroeconometric model to take account of all interrelationships and interactions in the economy. This study is based on the use of the WEFA Canada Canadian Macromodel (WCCM).



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Methodology

The methodology adopted to conduct this analysis was to use the model to simulate what might have been the economy's performance if the UI revenue and UI expenditure in real terms were held at levels that would prevail if the economy were operating at its trend or potential level of GDP. This "simulated" performance is then compared with the actual performance of the economy to see whether and by how much the UI program has acted to reduce income in economic peaks and to increase income in recessions.

This methodology involves the following steps: (i) estimating the trend growth of output, i.e., the output level that the economy would have achieved without the cyclical fluctuations; (ii) comparing the trend output level with the actual output level under the existing UI system, to estimate the difference or "output gap" between the trend and actual output levels with UI; and (iii) estimating the difference between the trend and the simulated output level as a measure of the output gap without UI. The stabilising effect of the UI program is interpreted as the observed difference between the output gaps with and without the UI program.

By way of illustrating the methodology, let us suppose that during a recession, the trend GDP would have grown at 4 percent but the GDP actually declined by 3.2 percent with the UI program in operation. This means that the actual shortfall in output with the UI program was 7.2 percent. Suppose that it is estimated that without UI, the GDP would have fallen by 8.0 percent, i.e. by an additional 0.8 percent. In this hypothetical case, the UI system prevented or saved 10.0 percent ($0.8/8.0$) of the potential output loss or reduced the GDP gap by 10.0 percent.

Since the stabilising impacts of the UI program would vary over time due to lagged effects, these impacts are usually measured at the point of maximum GDP gap (loss in the case of a recession

and gain in a period of boom). The UI system, on the other hand, could be de-stabilising if in a recessionary phase, it increases the output loss instead of reducing it, or increases the output gain in an economic expansion.

Key findings

The Canadian UI program has generally played a role as an automatic stabiliser, but changes made to the program parameters from time to time have somewhat altered the impact of the program.

Changes to the UI program in the late 1970's (more precisely in 1978-80 which was a phase of economic expansion) resulted in the program having a small destabilising impact on real GDP during this period, i.e., it tended to accentuate the expansion instead of dampening it.

The UI program did act as a stabiliser in the 1981-82 recession. In this recession recovery phase (1981-85), the UI system reduced the "GDP gap" by 8.3 per cent. In times of an economic recession, the measured or actual GDP (which is often used as an overall performance indicator of the economy) falls below the trend level. The trend level of GDP is the level of GDP that could be achieved if cyclical fluctuations did not occur. The difference between the actual and the trend GDP levels is described as the GDP gap. Thus a major empirical finding of the study is that without the UI program, the growth in GDP would have been smaller and the GDP gap would have been larger by 8.3 per cent.

In terms of employment, the UI program saved 35,000 jobs during the recession-recovery phase 1981-85 and reduced the employment gap by 13.2 percent which is to be interpreted in the same way as the GDP gap.

If the stabilisation impact is considered over a longer time span, 1981-1989, the estimated reduction in the GDP gap falls in the range of 8 to 11 percent.

In contrast, the stabilising impact of the American UI program has been reported to be smaller in a comparable U.S. study. It has been estimated that the UI program in the U.S. prevented 5.4 per cent of the income gap which translates into a 4.9 per cent reduction of the employment loss. This finding is hardly surprising in view of the fact that the American UI system has a smaller coverage of the work force and also it is less generous than the Canadian UI system.

During the more recent recession recovery period of 1990-93 (not a complete phase, however), the UI program reduced the GDP gap by 4 per cent and the employment gap by 7.2 per cent or 25,000 jobs. This means that the UI system prevented the estimated loss of 25,000 jobs.

During the expansion phase of 1987-90 also, the UI program acted as an economic stabiliser and tended to dampen the increase in GDP.

The impact of the UI program on the unemployment rate is less than that for employment because of its influence on the labour force. Weaker employment growth discourages workers from looking for work and thus lowers the labour force participation rate. The reverse happens in a recovery/expansion phase. The cyclical responsiveness of the participation rate reduces the magnitude of the potential rise in the unemployment rate in recessions and the potential decline in recoveries.

The two main aspects of the UI program that affect its behaviour as an economic stabiliser are the revenue and expenditure sides of the program. Since the mid-1970's, the expenditure side has consistently acted in a counter-cyclical fashion. This occurred despite changes to the program that have modified eligibility requirements and weekly benefits.

An examination of the behaviour of real UI expenditures per unemployed person reveals a pro-cyclical pattern of these expenditures from the late 1970's. This behaviour has lowered UI benefits in the past two recessions and raised them sharply during the boom of half of the 1980's. The program changes have thus partially offset the stabilising impact of the program during this period.

The main factor that has led to a sharp reduction in the stabilising power of the UI system is the revenue side. This has become particularly evident as the federal government has moved out of the financing side of the program. Because the UI account must balance over time, increases in contribution rates now follow close on the heels of expenditure increases. This draws income out of the economy and offsets the stimulating impacts of the expenditure side of the program.

In the recent recession, the increase in contribution rates has led to a relatively small increase in the UI deficit compared to those observed in the past. The UI program has been essentially one of income redistribution. What has allowed the program to act as an economic stabiliser are the differential impacts of revenues and expenditures on businesses and households. The increased expenditures in the hands of households have more than offset the negative impacts of contribution rate increases on corporate profits.

The separate FOCUS model simulations carried out by the University of Toronto yielded quantitatively different estimates for the Canadian economy. These largely reflect the difference in the structures of the WEFA and the FOCUS models, as well as some difference in the reference periods considered. But the main conclusions flowing from the two studies are very similar.

Main policy messages

These results suggest that the policy focus should be on the revenue side in order to enhance the stabilisation properties of the UI program. The changes in contribution rates to finance the program have reduced the program's stabilisation impacts. Raising the rates more slowly in a recovery or gradually reducing them during an expansion would augment the stabilising properties of the UI program. This would raise, however, the costs of the federal government if it had to provide significant interim financing for the program's increased deficits.

Biographical notes

Ernie Stokes is Managing Director of WEFA Canada and is responsible for generating forecasts for the Canadian economy.

Canada's Unemployment Insurance Program as an Economic Stabiliser by Ernie Stokes, is in preparation for publication by Human Resources Development Canada as an Insurance Program evaluation report, 1994.

Copies of the full technical report (when finalised) and further copies of this summary are available from:

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